EE623 Computer Vision
Spring 2024

Assignment 3 – 150 pts
Due: Mar 20, 11 59pm

Happy Spring Break – (Mar 10 – 16) – no classes during this time. This assignment is due after the spring break.

Provide a link to your Google Colab or Kaggle notebook or your Jupyter notebook on Canvas

25 pts/Question

1. Implement Auto Encoder architecture of CIFAR 10 dataset as provided in the below link.
   ⇒ Cifar10 Auto Encoder | Kaggle
2. Repeat the same architecture in Q1 by replacing the filter (number of kernels in convolution layer) combination to (64,32,16) for encoder part and (16,32,64) for decoder.
3. Repeat the same architecture in Q1 by replacing the filter combination to (YOUR CHOICE) for encoder part and (YOUR CHOICE) for decoder.
4. Compare the results of Q1, Q2, and Q3. Additionally, provide your thoughts which architecture is best autoencoder.
5. Implement Denoising Auto Encoder architecture on CIFAR 10 dataset as provided in the below link
   ⇒ AutoEncoder Denosing on CIFAR10 | Kaggle
6. Change the noise parameters in 'add_noise_and_clip_data' function to YOUR CHOICE and rerun the Q5